



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

ENTERED



SEP 18 2004

OFFICE OF
AIR AND RADIATION

R. Paul Detwiler, Acting Manager
Carlsbad Field Office
U.S. Department of Energy
P.O. Box 3090
Carlsbad, New Mexico 88221-3090

Dear Dr. Detwiler:

The U.S. Environmental Protection Agency (EPA or Agency) conducted an audit from August 3-5, 2004, of the Washington TRU Solutions (WTS) quality assurance (QA) program. The WTS QA program provides on-site surveillance of activities that are important to the long-term containment of transuranic (TRU) waste within the Waste Isolation Pilot Plant (WIPP). The investigation of the activities selected for EPA's audit sample showed that WTS has properly maintained its QA program since the previous audit conducted in August 2003. The enclosed report documents the results of EPA's audit.

EPA audited two elements of WTS's QA program, *Organization* and *Corrective Action*. The Agency identified no findings and one item of concern. EPA is concerned that the QA department may not have sufficient resources due to the following factors: 1) weekly shipment levels averaging above the initial design level; 2) future weekly shipments from accelerated clean-up programs; 3) recent budget cuts; and 4) loss of personnel. EPA does not require a response to this concern. However, the Agency will continue to monitor this issue during future audits of WTS.

No response is required from the Department of Energy's Carlsbad Field Office to this letter or the enclosed report. Both will be placed in EPA Air Docket No. A-98-49. Please contact Mike Eagle at (202) 343-9376 if you have questions regarding the report.

Sincerely,

Bonnie C. Gitlin, Acting Director
Radiation Protection Division

Enclosure



cc: Ava Holland (CBFO) (w/enclosure)
Steve Zappe (NMED) (w/enclosure)
Mike Lipscomb (WTS) (w/enclosure)

**DOCKET NO: A-98-49
II-A1-63**

**EPA AUDIT OF THE
WASHINGTON TRU SOLUTIONS
QUALITY ASSURANCE PROGRAM
FOR THE WASTE ISOLATION PILOT PLANT
August 3-5, 2004**

**U. S. ENVIRONMENTAL PROTECTION AGENCY
Office of Radiation and Indoor Air
Center for Federal Regulations
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460**

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Technical Support for this document was provided by Trinity Engineering Associates and its subcontractors under EPA Contract 68-D-00-210.

1.0 EXECUTIVE SUMMARY

From August 3-5, 2004, the U.S. Environmental Protection Agency (EPA or Agency) conducted an audit of the Washington TRU Solutions (WTS) Quality Assurance (QA) program for the Waste Isolation Pilot Plant (WIPP). The investigation of the activities selected for the EPA audit sample showed that the WTS QA program continues to be properly executed.

The WIPP is the nation's geologic repository for the permanent disposal of transuranic (TRU) waste. WTS is the Department of Energy's (DOE) contractor at WIPP. As such, WTS is responsible for the day-to-day operations of the WIPP. WTS's QA program provides internal oversight of activities that are important to the long-term containment of TRU waste at WIPP.

EPA audited two elements of WTS's QA program, *Organization* and *Corrective Action*. EPA identified no findings and one item of concern during the audit.

EPA is concerned that the QA department may not have sufficient resources due to the following factors: 1) weekly shipment levels averaging above the initial design level; 2) future weekly shipments from accelerated clean-up programs; 3) recent budget cuts; and 4) loss of personnel. EPA does not require a response to this concern. However, EPA will continue to look into this concern during future audits of WTS.

This report will be made available to the public through the Agency's public dockets.

2.0 BACKGROUND

2.1 Regulatory Background

In 40 CFR Part 194.22, the Department of Energy (DOE) is required to execute a Quality Assurance (QA) program for all items and activities that are important the long-term containment of transuranic (TRU) waste within the Waste Isolation Pilot Plant (WIPP). The QA program must be in accordance with Nuclear Quality Assurance (NQA) standards developed by The American Society of Mechanical Engineers (ASME), as follows:

1. ASME NQA-1-1989 edition;
2. ASME NQA-2a-1990 Addenda, Part 2.7, to ASME NQA-2-1989 edition; and
3. ASME NQA-3-1989 edition (excluding Section 2.1 (b) and (c) and Section 17.1).

In December 1996, the U.S. Environmental Protection Agency (EPA or Agency) conducted an audit that determined that DOE had properly executed a QA program for the WIPP. During the 1996 audit, EPA verified that DOE established the applicable requirements of the NQA standards in its Quality Assurance Program Document (QAPD), and that the QAPD was properly implemented. The QAPD is the QA plan for WIPP that establishes the applicable requirements of the NQA standards. The implementation of the QAPD is enforced by the QA organization of DOE's Carlsbad Field Office (CBFO), which audits all other WIPP organizations, including Washington TRU Solutions (WTS), to ensure that they also establish and implement the applicable NQA requirements.

WTS's QA program provides internal oversight of activities that are important to the long-term containment of TRU waste within WIPP. The Agency conducted an initial inspection of WTS's QA Program in 1997. Subsequently, EPA has conducted annual maintenance inspections of WTS's QA program. The Agency may either conduct its own audits or inspect audits conducted by DOE. The difference between an audit and an inspection lies in the role that EPA performs. During an audit, EPA assumes all responsibilities associated with assessing a QA program; however, during an inspection, the Agency also performs some oversight of DOE's verification of a QA program.

WTS is the successor organization to Westinghouse TRU Solutions as the prime contractor at the WIPP site. From August 5-6, 2003, EPA verified that the transition from Westinghouse TRU Solutions to WTS did not diminish the proper execution of the QA program at WIPP.

This recent EPA audit was a part of the annual inspection cycle designed to verify proper maintenance of WTS's QA program. Table 1 provides a summary of EPA audits and inspections of the QA program for WIPP.

Table 1. Summary of EPA Audits and Inspections of WIPP's QA Program		
Inspection	August 1997	Initial Inspection of Westinghouse TRU Solutions QA program
Inspection	February 17-19, 1998	Inspection of Westinghouse TRU Solutions QA program
Inspection	February 9-11, 1999	Inspection of Westinghouse TRU Solutions QA program
Follow-up Audit	June 30, 1999	One-day follow-up from previous inspection
Inspection	August 7-8, 2000	Inspection of Westinghouse TRU Solutions QA program
Inspection	May 7-11, 2001	Inspection of Westinghouse TRU Solutions QA program
Inspection	July 9-11, 2002	Inspection of Westinghouse TRU Solutions QA program
Inspection	August 5-6, 2003	Inspection of Washington TRU Solutions QA program
Audit	August 3-5, 2004	Audit of Washington TRU Solutions QA program

2.2 Washington TRU Solutions, LLC Background

WTS is DOE's performance-based contractor at WIPP. As such, WTS's responsibilities include the day-to-day management, operations, and maintenance of WIPP. WTS offices are located near Carlsbad, New Mexico.

Throughout this report, references to legacy documents developed by Westinghouse TRU Solutions that are still active in the new organization will be referenced without the use of an acronym in order to differentiate from documents developed by the current management and operations contractor, WTS.

3.0 PURPOSE AND SCOPE

Section 194.22(a)(1) requires that the WIPP establish and implement the applicable requirements of: 1) ASME NQA-1-1989 edition; 2) ASME NQA-2a-1990 Addenda, Part 2.7, to ASME NQA-

2-1989 edition; and 3) ASME NQA-3-1989 edition (excluding Section 2.1(b) and (c) and Section 17.1). The purpose of this EPA audit was to confirm the continued compliance of WTS's QA program with the above requirements.

Section 194.22(a)(2) requires that WIPP properly execute a QA program for all items and activities that are important to the long-term containment of TRU waste at WIPP. Therefore, the scope of this EPA audit was the WTS's QA program for items and activities that are important to the this containment. The scope of this audit did not include activities regarding waste transportation or waste management. Section 194.22(a)(2) reads as follows:

Any compliance application shall include information which demonstrates that the quality assurance program required pursuant to paragraph (a)(1) of this section has been established and executed for:

- (i) Waste characterization activities and assumptions;*
- (ii) Environmental monitoring, monitoring of the performance of the disposal system, and sampling and analysis activities;*
- (iii) Field measurements of geologic factors, ground water, meteorologic, and topographic characteristics;*
- (iv) Computations, computer codes, models and methods used to demonstrate compliance with the disposal regulations in accordance with the provisions of this part;*
- (v) Procedures for implementation of expert judgment elicitation used to support applications for certification or re-certification of compliance;*
- (vi) Design of the disposal system and actions taken to ensure compliance with design specifications;*
- (vii) The collection of data and information used to support compliance application(s); and*
- (viii) Other systems, structures, components, and activities important to the containment of waste in the disposal system.*

4.0 DEFINITIONS

Finding: A determination that a specific item or activity does not meet an applicable requirement of the nuclear quality assurance standards. A finding requires a response.

Concern: A judgment that a finding may occur in the future, and depending on the magnitude of the issue, may or may not require a response.

Quality: The reliability of a specific item or activity that is important to the long-term containment of TRU-waste at WIPP. *Quality Achievement* is the responsibility of organizations that directly produce such an item or perform such an activity. *Quality Verification* is the

responsibility of QA organizations that do not produce such items or perform such activities. For example, a failure to achieve quality is not the responsibility of the QA organization that verifies quality achievement.

5.0 AUDIT TEAM AND PARTICIPANTS

The audit team consisted of one representative of the EPA and one support contractor.

<u>Team Member</u>	<u>Position</u>	<u>Affiliation</u>
Behram Shroff	Audit Team Leader	EPA
Jerry Rossman	Inspector	Trinity Engineering Associates

Numerous WTS personnel participated in the audit, and they are listed in Attachment 1.

6.0 PERFORMANCE OF THE AUDIT

EPA's audit team conducted personnel interviews and document reviews to verify that the WTS QA program is in accordance with 40 CFR 194.22. This is documented through checklists based on the requirements of ASME NQA-1, Element 1, *Organization*, and Element 16, *Corrective Action*, which are provided in Attachment 3 of this report.

A list of the documents reviewed by the audit team is provided in Attachment 4 of this report.

6.1 Organization

EPA conducted personnel interviews and document reviews regarding the organization of the WTS QA program. Those interviewed included: Mike Lipscomb, QA Manager of WTS, and Bill Allen, QA Program/Project Integration of WTS. Additional interviews were held with Beck Anderson, Leo Estrada and Bertha Cassingham. EPA reviewed WP 13-1 rev. 24, the WTS's QAPD and the WTS's Semi-Annual Trend Analysis for the First and Second Quarters of FY2004.

EPA found no findings and one minor concern with the WTS QA program organization. (See section 7.2 of this report for a description of the concern.)

The results of the audit verify WTS compliance to NQA-1, Basic Requirement 1, *Organization*.

6.2 Corrective Action

The EPA conducted personnel interviews and document reviews regarding corrective actions for the WTS QA program. Those interviewed were: Jon Hoff, Assurance Programs Manager, as well as Marty Keathley, Beck Anderson and Leo Estrada.

As of February 1, 2004, WTS began a new program to capture and address corrective actions. The procedure is documented in WP 04-IM1000, rev. 0, "Issues Management Program Processing of WIPP FORMs." FORM is a reference to one form which addresses a wide spectrum of issues including, but not limited to, health and safety concerns, issues affecting quality, employee suggestions and personnel concerns. Although a new procedure, there have been over 130 WIPP FORMs issued since the start of the program. The WIPP FORM, once initiated by an individual, is reviewed by the Steering Committee, a cross functional committee which addresses each issue. EPA's audit team attended a Steering Committee Meeting on Wednesday, August 4, 2004, which deal with WIPP FORM issues. The cross functional team attending this particular meeting were:

Steve Youngerman, Manager, Operations and Chairperson
Ann Strait, Manager, Nuclear Safety
Scott Cassingham, Manager, Technical Support
Tom Ferguson, Manager, SH/INDSAF
Marty Keathley, Quality Assurance Representative
Stewart Jones, Manager, Environmental
Leo Estrada, WIPP FORM Coordinator
Robbie Morrison, Transportation Representative
Berry Pace, PAAA Coordinator

The results of the audit verify WTS compliance to NQA-1, Element 16, *Corrective Action*. However, while the EPA had no findings or concerns issued for this element, checklist items #2 and #3 are reported as "N/A" with respect to meeting the NQA requirement because there was no objective evidence that there were any Significant Conditions Adverse to Quality (SCAQ). There was, however, strong evidence of compliance with lesser issues.

7.0 SUMMARY OF FINDINGS AND CONCERNS

The Agency did not identify any findings. There was, however, one concern regarding WTS's compliance to NQA-1, *Organization*.

7.1 Findings

EPA did not identify any findings during its audit of WTS.

7.2 Concerns

EPA identified one concern during its audit of WTS. The item of concern is within the *Organization* element of NQA-1, which states "... Such persons or organizations shall report to a management level such that required authority and organizational freedom are provided, including sufficient independence from cost and schedule considerations." EPA remains concerned that the QA department, as an organization, may be hindered in maintaining sufficient independence from cost and schedule considerations due to weekly shipment levels averaging above the initial design

level and future increases in weekly shipments coming from accelerated clean-up programs, combined with recent budget cuts and loss of personnel.

EPA does not require a response to this concern.

8.0 REFERENCES

The documents reviewed by EPA's audit team are listed in Attachment 4 of this report.

ATTACHMENT 1

PERSONNEL PARTICIPATING IN THE EPA AUDIT OF WTS, AUGUST 3-5, 2004

Name	Organization	Audit Interview	Close-out Meeting
M. Lipscomb	WTS	x	x
W. Allen	WTS	x	x
J. Hoff	WTS	x	x
W. Anderson	WTS	x	
L. Estrada	WTS	x	
B. Cassingham	WTS	x	
M. Keathley	WTS	x	
S. Youngerman	WTS		
A. Strait	WTS		
S. Cassingham	WTS		
T. Ferguson	WTS		
S. Jones	WRES		
R. Morrison	WTS		
B. Pace	WTS		
C. Sanders	WTS	x	
A. Holland	CBFO		x

ATTACHMENT 2

AUDITOR: Behram Shroff & Jerry Rossman

DATE: August 5, 2004

NQA REQUIREMENT: Element 1, <i>Organization</i>			
AUDITEE PROCEDURE: WP 13-1, Rev. 24, WTS Quality Assurance Program Description			
FINDING*	CONCERN X		
<p>NQA-1, Section 1 which states "... Such persons or organizations shall report to a management level such that required authority and organizational freedom are provided, including sufficient independence from cost and schedule considerations."</p> <p>It is the EPA's concern that with weekly shipment levels averaging above the initial design level and future increases in weekly shipments coming from accelerated clean-up programs, combined with recent budget cuts and headcount loss, the QA department as an organization may be hindered in maintaining sufficient independence from cost and schedule considerations.</p> <p>This concern does not require a response.</p>			
AFFECTS QUALITY ASSURANCE:	YES X	NO	
AFFECTS QUALITY:	YES	NO X	
ADEQUATE RESPONSE PROVIDED:	YES	NO	N/A X
CORRECTED DURING AUDIT:	YES	NO	N/A X

*Attach objective evidence to form

ATTACHMENT 3
NQA CHECKLISTS

NQA-1 CHECKLIST - WTS August 3-4, 2004

ELEMENT: **1**

TITLE: Organization

AUDITORS: J. Rossman, B. Shroff

Does the reference document adequately define, describe, address, or satisfy the following:	Yes	No	Applicable Procedure & Para.
<u>Basic Requirements</u>			
1. Are the organizational structure, functional responsibilities, levels of authority, and lines of communication documented for activities affecting quality?	Y		Interview with M. Lipscomb, B. Allen, W. Anderson, L. Estrada & B. Cassingham. Org Chart Issued June 28, 2004
2. Do persons or organizations responsible for performing quality assurance functions have sufficient authority, access to work areas, and organizational freedom to: <ul style="list-style-type: none"> • identify quality problems; • initiate, recommend, or provide solutions to quality problems through designated channels; • verify implementation of solutions; and • assure that further processing, deliver, installation, or use is controlled until proper disposition of a nonconformance, deficiency, or unsatisfactory condition has occurred? 	Y		Interview with M. Lipscomb, B. Allen, W. Anderson, L. Estrada & B. Cassingham. WP 13-1, rev. 24 sec. 1.1.5
3. Do persons or organizations responsible for performing quality assurance functions have direct access to responsible management at a level where appropriate action can be effected?	Y		Interview with M. Lipscomb, B. Allen, W. Anderson, L. Estrada & B. Cassingham. Org Chart Issued June 28, 2004
4. Do persons or organizations responsible for performing quality assurance functions report to a management level that provides the required authority and organizational freedom, including sufficient independence from cost and schedule considerations?	Y		Interview with M. Lipscomb, B. Allen, W. Anderson, L. Estrada & B. Cassingham. WP 13-1, rev. 24 sec. 1.1.5
<u>Supplementary Requirements (1S-1)</u>			

Does the reference document adequately define, describe, address, or satisfy the following:	Yes	No	Applicable Procedure & Para.
<p>1. Are the organizational structure and the responsibility assignments such that:</p> <ul style="list-style-type: none"> • quality is achieved and maintained by those who have been assigned responsibility for performing work, and • quality achievement is verified by persons or organizations not directly responsible for performing the work? 	Y		<p>Interview with M. Lipscomb, B. Allen, W. Anderson, L. Estrada & B. Cassingham.</p> <p>WP 13-1, rev. 24 sec. 1.1.3, 1.1.4</p> <p>WP 13-1, rev. 24 sec. 1.1.5</p>
<p>2. Does the individual(s) or organization(s) responsible for establishing and executing a quality assurance program delegate any or all of the work to others, and if so, does the individual(s) or organization(s) retain responsibility for the quality assurance program?</p>	Y		<p>Interview with M. Lipscomb, B. Allen.</p> <p>WP 13-1, rev. 24 sec. 1.1.6</p>
<p>3. Is responsibility for the control of further processing, delivery, installation, or operation of nonconforming items designated in writing?</p>	Y		<p>Interview with M. Lipscomb, B. Allen.</p> <p>WP 13-1, rev. 24 sec. 1.1.3</p> <p>WP 13-QA3001 rev. 6</p> <p>WP 13-QA3004 rev. 6 sec. 3.1</p> <p>NCR FY2004-06</p>
<p>4. Where more than one organization is involved in the execution of quality assurance activities, is the responsibility and authority of each organization clearly established and documented?</p>	Y		<p>Interview with M. Lipscomb, B. Allen.</p> <p>WP 13-1, rev. 24 sec. 1.1.9</p>
<p>5. Are the external interfaces between organizations, as well as the internal interfaces between organizational units, documented? Are interface responsibilities defined and documented?</p>	Y		<p>Interview with M. Lipscomb, B. Allen.</p> <p>WP 13-1, rev. 24 sec. 1.1.9</p> <p>Tri Part Agreement between BNFL, Petersen Inc. and WTS dated August 2002.</p>

NQA-1 CHECKLIST - WTS August 3-4, 2004

ELEMENT: 16

TITLE: Corrective Action

AUDITORS: J. Rossman, B. Shroff

Does the reference document adequately define, describe, address, or satisfy the following:	Yes	No	Applicable Procedure & Para.
<u>Basic Requirements</u>			
1. Are conditions adverse to quality identified promptly and corrected as soon as practical?	Y		Interview with Jon Hoff WP 04-IM1000, rev. 0 Att. 2 WIPP FORMS: WF04-16, WF04-107, WF04-022, WF04-038, WF04-102, WF04-039, WF04-040 and WF04-043
2. In the case of a significant condition adverse to quality, is the cause of the condition determined and corrective action taken to preclude recurrence?	N/A*		Interview with B. Anderson, L. Estrada, M. Keathley. WP 04-IM1000, rev. 0 Att. 1, sec. 1 No SCAQs
3. Are the identification, cause and corrective action for significant conditions adverse to quality documented and reported to appropriate levels of management?	N/A*		Interview with B. Anderson, L. Estrada, M. Keathley. WP 04-IM1000, rev. 0 Att. 1, sec. 2 No SCAQs
4. Is follow-up action taken to verify implementation of corrective action?	Y		Interview with B. Anderson, L. Estrada, M. Keathley. WP 04-IM1000, rev. 0, sec. 5.1 Attended Steering Committee Meeting WIPP FORMS: WF04-18, WF04-42, WF04-58, WF04-102, WF04-119, WF04-120, WF04-122, WFO4-124
<u>Supplementary Requirement</u> - None			

* Because no Significant Conditions Adverse to Quality (SCAQ) were identified.

ATTACHMENT 4
REFERENCES

1. Washington TRU Solutions. Quality Assurance Program Description. WP 13-1, rev. 24.
2. WTS Organization Chart. Date Issued: June 28, 2004.
3. WTS Issues Management Program Processing of WIPP FORMs. WP 04-IM1000, rev. 0.
4. WTS WIPP FORM LOG. Date Issued: July 27, 2004.
5. WTS WIPP FORM. EA04IM1000-1-0, rev. 0.
6. Tri-Party Agreement between BNFL, Petersen Inc. and WTS dated August, 2002.
7. WTS Semi-Annual Trend Report for First and Second Quarter FY2004.
8. WTS Nonconformance Report. WP13-QA3004, rev. 6.
9. WTS Issue Hold Tags. WP 13-QA3001, rev. 6.
10. WTS CH Waste Processing. WP 05-WH1011, rev. 20.
11. WTS Tru Solutions Management Charter. WIPP FORM Screening Committee. MC 1.7, rev. 0.
12. WTS Tru Solutions Management Policy. Issues Management "WIPP FORM". MC 1.7, rev.0.
13. WTS WIPP FORM. WF04-16.
14. WTS WIPP FORM. WF04-22.
15. WTS WIPP FORM. WF04-38.
16. WTS WIPP FORM. WF04-39.
17. WTS WIPP FORM. WF04-40.
18. WTS WIPP FORM. WF04-42.

REFERENCES CONTINUED

19. WTS WIPP FORM. WF04-43.
20. WTS WIPP FORM. WF04-58.
21. WTS WIPP FORM. WF04-102.
22. WTS WIPP FORM. WF04-120.
23. WTS WIPP FORM. WF04-122.
24. WTS WIPP FORM. WF04-124.